APPENDIX A

Replacement paragraph at page 5, lines 20 - 21 (marked-up version):

FIGS. 6A to [6D] 6C show various functions that may be included in a system according to a second embodiment.

Replacement paragraph at page 13, line 22 – page 14, line 7 (marked-up version):

A metadata service **404** may interact with a gateway service **402** to service metadata related requests. In addition, a metadata service **404** may interact with the bitfile storage service **406** to handle its storage needs. As is well known in the art, metadata may include predetermined information on files contained in the storage system **400**. A metadata service **404** may be conceptualized as being de-coupled from the other services as metadata requests can be serviced as independent operations without any coupling. One example of a system that may be included in a metadata service is disclosed in a commonly-owned co-pending U.S. patent application serial number 09/659,107, entitled STORAGE SYSTEM HAVING PARTITIONED MIGRATABLE METADATA filed on September 11, 2000 by *Nowicki* (referred to hereinafter as *Nowicki*).

Replacement paragraph at page 15, lines 4 – 10 (marked-up version):

In the example of FIG. 4, a gateway service **402** may include a number of gateway servers **408-0** to **408-**[n]i, where [n] i is an arbitrary number. A gateway server (**408-0** to **408-**[n]i) may host one or more client applications for accessing files in the storage system **400**. Hosted applications are shown in FIG. 4 as items **410-0** to **410-**[n]i. A hosted application (**410-0** to **410-**[n]i) may have a corresponding interface **412-0** to **412-**[n]i that can enable interaction between a hosted application and other system services, as will be described in more detail below.

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Replacement paragraph at page 15, lines 11 – 13 (marked-up version):

Gateway servers (**408**-0 to **408**-[n]i) may be de-coupled from one another as described in conjunction with FIG. 1. For example, each gateway server (**408**-0 to **408**-[n]i) may service requests as independent operations without any coupling.

Replacement paragraph at page 15, lines 14 – 22 (marked-up version):

As shown in FIG. 4, a metadata service **404** may include a number of metadata servers **414**-0 to **414**-[n]i, where i is an arbitrary number. A metadata server (**414**-0 to **414**-[n]i) may include a metadata application that can access metadata for an internal client for example and without limitation, a gateway server. The metadata accesses are according to external client requests. Such accesses may vary according to a particular metadata attribute (e.g., file system). Metadata server applications are shown as items **416**-0 to **416**-[n]i. A metadata server application (**416**-0 to **416**-[n]i) may have a corresponding interface **418**-0 to **418**-[n]i. A metadata application interface (**418**-0 to **418**-[n]i) can enable interaction between a metadata application and other system services, as will be described in more detail below.

Replacement paragraph at page 15, line 23 – page 16, line 6 (marked-up version):

Like the gateway servers (**408**-0 to **408**-[n]i), metadata servers (**414**-0 to **414**-[n]i) may be de-coupled from one another. In the example of FIG. 4, metadata servers (**414**-0 to **414**-[n]i) can access metadata stored on metadata storage media **420**. It is understood that each metadata server (**414**-0 to **414**-[n]i) can include a physical connection to metadata storage media **420**. The physical connection can include for example and without limitation a network, fibre channel, or a connection customarily found in direct-attached storage systems, NAS, or SAN systems.

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Replacement paragraph at page 16, lines 7 – 15 (marked-up version):

Referring once again to FIG. 4, a bitfile storage service **406** may include a number of storage servers **422-0** to **422-[n]k, where k is an arbitrary number**. A storage server (**422-0** to **422-[n]k**) may include one or more storage server applications (**424-0** to **424-[n]k**) that can access files for an internal client, for example and without limitation n, a gateway server. The file accesses are according to external client requests. Such accesses may include, without limitation, read, writes, file creation, file deletion and/or file archiving. Storage server interfaces **426-0** to **426-[n]k** may be provided that correspond to storage server applications (**424-0** to **424-[n]k**). Storage server interfaces (**426-0** to **426-[n]k**) may enable interaction between a storage server application and other system services, as will be described in more detail below.

Replacement paragraph at page 16, lines 16 – 20 (marked-up version):

Like the servers of the other services (**402** and **404**), storage servers (**422-0** to **422-[n]k**) may be de-coupled from one another. Each storage server (**422-0** to **422-[n]k**) may have access to bitfile storage media **428** by way of some physical connection. The physical connection can include for example and without limitation a network, fibre channel, or a connection customarily found in direct-attached storage systems, NAS, or SAN systems.

Replacement paragraph at page 16, lines 21 – page 17, line 4 (marked-up version):

A storage system **400** according to a second embodiment may further include one or more request routing servers **430a** and **430b**. A request routing server (**430a** and **430b**) may include server directories **432a** and **432b**. A server directory (**432a** and **432b**) may be queried to receive the location of a server that can service a given request. In one particular arrangement, a server directory (**432a** and **432b**) may be queried by a gateway interface (**412-0** to **412-[n]i**) in response to an external client request. A server directory (**432a** and **432b**) may then return the location(s) of one or more servers that can service a request.

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Replacement paragraph at page 17, lines 17 – 19 (marked-up version):

In alternate arrangements, gateway servers (**408**-0 to **408**-[n]i) may each cache all or a portion of a server directory. In such cases, queries to find an available/appropriate server for a given request may include a process internal to a gateway server.

Replacement paragraph at page 21, lines 18 - 22 (marked-up version):

[Referring now to FIG. 6D, a] <u>A</u> gateway server interface may include a Gateway_Server_Request function. A Gateway_Server_Request function may receive a request for a gateway service from, for example and not limiting, a storage server. [FIG. 6D includes non-limiting examples of requests including accepting connections, mapping requests, and mapping responses.] The results of a request may then be output.

Replacement paragraph at page 21, line 23 – page 22, line 6 (marked-up version):

A Metadata_Request function may receive a request for a particular metadata service from a gateway server. Such a request may then be serviced. [FIG. 6D includes non-limiting examples of requests including accessing file directories, searching metadata for files meeting particular criteria, and changing metadata in response to particular events, such as renaming and/or moving a file.] The results of a request may then be output. A more detailed discussion of the various functions of a metadata server is disclosed in <u>the previously-referenced,</u> co-pending patent application <u>of</u> *Nowicki*.

Replacement paragraph at page 22, lines 7 – 10 (marked-up version):

A Storage_Server_Request function may receive a request for a particular service from a gateway server. [FIG. 6D includes non-limiting examples of requests that may be serviced, including file reads, writes, and archiving.] The results of a request may then be output.

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